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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 224

[Docket No. 111025652-1657-01]

RIN 0648-XA798

Endangered and Threatened Wildlife; 90-day Finding on a Petition to List the Scalloped

Hammerhead Shark as Threatened or Endangered Under the Endangered Species Act

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: 90-day petition finding, request for information, and initiation of status review.

SUMMARY: We, NMFS, announce a 90-day finding on a petition to list the scalloped hammerhead shark (*Sphyrna lewini*) or, in the alternative, multiple distinct population segments (DPSs) of the scalloped hammerhead shark as threatened or endangered under the Endangered Species Act (ESA), and to designate critical habitat concurrently with the listing. We find that the petition and information in our files present substantial scientific or commercial information indicating that the petitioned action may be warranted. We will conduct a status review of the species to determine if the petitioned action is warranted. To ensure that the status review is comprehensive, we are soliciting scientific and commercial information pertaining to this species from any interested party.

DATES: Information and comments on the subject action must be received by [insert date 60 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may submit comments, information, or data, identified by “NOAA-NMFS-2011-0261” by any one of the following methods:

- Electronic Submissions: Submit all electronic comments via the Federal eRulemaking Portal [http:// www.regulations.gov](http://www.regulations.gov). To submit comments via the e-Rulemaking Portal, first click the “submit a comment” icon, then enter “NOAA-NMFS-2011-0261” in the keyword search. Locate the document you wish to comment on from the resulting list and click on the “Submit a Comment” icon on the right of that line.
- Mail or hand-delivery: Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910.

Instructions: All comments received are a part of the public record and may be posted to <http://www.regulations.gov> without change. All personally identifiable information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information. NMFS will accept anonymous comments. Attachments to electronic comments will be accepted in Microsoft Word, Excel, Corel WordPerfect, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: Maggie Miller, NMFS, Office of Protected Resources, (301) 427-8403.

SUPPLEMENTARY INFORMATION:

Background

On August 14, 2011, we received a petition from WildEarth Guardians and Friends of Animals to list the scalloped hammerhead shark (Sphyrna lewini) as threatened or endangered under the ESA throughout its entire range, or, as an alternative, to delineate the species into five DPSs (Eastern Central and Southeast Pacific, Eastern Central Atlantic, Northwest and Western

Central Atlantic, Southwest Atlantic, and Western Indian Ocean) and list any or all of these DPSs as threatened or endangered. The petitioners also requested that critical habitat be designated for the scalloped hammerhead under the ESA. Copies of the petition are available upon request (see ADDRESSES, above).

ESA Statutory, Regulatory, and Policy Provisions and Evaluation Framework

Section 4(b)(3)(A) of the ESA of 1973, as amended (16 U.S.C. 1531 et seq.), requires, to the maximum extent practicable, that within 90 days of receipt of a petition to list a species as threatened or endangered, the Secretary of Commerce make a finding on whether that petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted, and to promptly publish such finding in the Federal Register (16 U.S.C. 1533(b)(3)(A)). When it is found that substantial scientific or commercial information in a petition indicates the petitioned action may be warranted (a "positive 90-day finding"), we are required to promptly commence a review of the status of the species concerned during which we will conduct a comprehensive review of the best available scientific and commercial information. In such cases, we conclude the review with a finding as to whether, in fact, the petitioned action is warranted within 12 months of receipt of the petition. Because the finding at the 12-month stage is based on a more thorough review of the available information, as compared to the narrow scope of review at the 90-day stage, a "may be warranted" finding does not prejudice the outcome of the status review.

Under the ESA, a listing determination may address a species, which is defined to also include subspecies and, for any vertebrate species, any DPS that interbreeds when mature (16 U.S.C. 1532(16)). A joint NMFS-U.S. Fish and Wildlife Service (USFWS) (jointly, "the Services") policy clarifies the agencies' interpretation of the phrase "distinct population

segment'' for the purposes of listing, delisting, and reclassifying a species under the ESA (61 FR 4722; February 7, 1996). A species, subspecies, or DPS is "endangered" if it is in danger of extinction throughout all or a significant portion of its range, and "threatened" if it is likely to become endangered within the foreseeable future throughout all or a significant portion of its range (ESA sections 3(6) and 3(20), respectively, 16 U.S.C. 1532(6) and (20)). Pursuant to the ESA and our implementing regulations, we determine whether species are threatened or endangered based on any one or a combination of the following five section 4(a)(1) factors: (1) the present or threatened destruction, modification, or curtailment of habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; and (5) any other natural or manmade factors affecting the species' existence (16 U.S.C. 1533(a)(1), 50 CFR 424.11(c)).

ESA-implementing regulations issued jointly by NMFS and USFWS (50 CFR 424.14(b)) define "substantial information" in the context of reviewing a petition to list, delist, or reclassify a species as the amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted. In evaluating whether substantial information is contained in a petition, the Secretary must consider whether the petition: (1) clearly indicates the administrative measure recommended and gives the scientific and any common name of the species involved; (2) contains detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved and any threats faced by the species; (3) provides information regarding the status of the species over all or a significant portion of its range; and (4) is accompanied by the appropriate supporting documentation in the form of bibliographic

references, reprints of pertinent publications, copies of reports or letters from authorities, and maps (50 CFR 424.14(b)(2)).

Judicial decisions have clarified the appropriate scope and limitations of the Services' review of petitions at the 90-day finding stage, in making a determination that a petitioned action "may be" warranted. As a general matter, these decisions hold that a petition need not establish a "strong likelihood" or a "high probability" that a species is either threatened or endangered to support a positive 90-day finding.

We evaluate the petitioners' request based upon the information in the petition including its references and the information readily available in our files. We do not conduct additional research, and we do not solicit information from parties outside the agency to help us in evaluating the petition. We will accept the petitioners' sources and characterizations of the information presented if they appear to be based on accepted scientific principles, unless we have specific information in our files that indicates the petition's information is incorrect, unreliable, obsolete, or otherwise irrelevant to the requested action. Information that is susceptible to more than one interpretation or that is contradicted by other available information will not be dismissed at the 90-day finding stage, so long as it is reliable and a reasonable person would conclude it supports the petitioners' assertions. In other words, conclusive information indicating the species may meet the ESA's requirements for listing is not required to make a positive 90-day finding. We will not conclude that a lack of specific information alone negates a positive 90-day finding if a reasonable person would conclude that the unknown information itself suggests an extinction risk of concern for the species at issue.

To make a 90-day finding on a petition to list a species, we evaluate whether the petition presents substantial scientific or commercial information indicating the subject species may be

either threatened or endangered, as defined by the ESA. First, we evaluate whether the information presented in the petition, along with the information readily available in our files, indicates that the petitioned entity constitutes a “species” eligible for listing under the ESA. Next, we evaluate whether the information indicates that the species faces an extinction risk that is cause for concern; this may be indicated in information expressly discussing the species’ status and trends, or in information describing impacts and threats to the species. We evaluate any information on specific demographic factors pertinent to evaluating extinction risk for the species (e.g., population abundance and trends, productivity, spatial structure, age structure, sex ratio, diversity, current and historical range, habitat integrity or fragmentation), and the potential contribution of identified demographic risks to extinction risk for the species. We then evaluate the potential links between these demographic risks and the causative impacts and threats identified in section 4(a)(1).

Information presented on impacts or threats should be specific to the species and should reasonably suggest that one or more of these factors may be operative threats that act or have acted on the species to the point that it may warrant protection under the ESA. Broad statements about generalized threats to the species, or identification of factors that could negatively impact a species, do not constitute substantial information indicating that listing may be warranted. We look for information indicating that not only is the particular species exposed to a factor, but that the species may be responding in a negative fashion; then we assess the potential significance of that negative response.

Many petitions identify risk classifications made by non-governmental organizations, such as the International Union on the Conservation of Nature (IUCN), the American Fisheries Society, or NatureServe, as evidence of extinction risk for a species. Risk classifications by

other organizations or made under other Federal or state statutes may be informative, but the classification alone may not provide the rationale for a positive 90-day finding under the ESA. For example, as explained by NatureServe, their assessments of a species' conservation status do "not constitute a recommendation by NatureServe for listing under the U.S. Endangered Species Act" because NatureServe assessments "have different criteria, evidence requirements, purposes and taxonomic coverage than government lists of endangered and threatened species, and therefore these two types of lists should not be expected to coincide"

(<http://www.natureserve.org/prodServices/statusAssessment.jsp>). Thus, when a petition cites such classifications, we will evaluate the source of information that the classification is based upon in light of the standards on extinction risk and impacts or threats discussed above.

Distribution and Life History of the Scalloped Hammerhead Shark

The scalloped hammerhead shark is a circumglobal species that lives in coastal warm temperate and tropical seas. It occurs over continental and insular shelves, as well as adjacent deep waters, but is seldom found in waters cooler than 22° C (Compagno, 1984; Schulze-Haugen *et al.*, 2003). Scalloped hammerhead sharks are highly mobile and partly migratory and are likely the most abundant of the hammerhead species (Maguire *et al.*, 2006). However, Maguire *et al.* (2006) also notes that "although its worldwide distribution and known high abundance gives the species some protection globally, the risk of local depletions remains a serious concern."

In the western Atlantic Ocean, the scalloped hammerhead range extends from the Northeast coast of the United States (from New Jersey to Florida) to Brazil, including the Gulf of Mexico and Caribbean Sea. In the eastern Atlantic, it can be found from the Mediterranean Sea to Namibia. Populations in the Indian Ocean are found in the following locations: South Africa

and the Red Sea to Pakistan, India, and Myanmar, and in the western Pacific the scalloped hammerhead can be found from Japan and China to New Caledonia, including throughout the Philippines, Indonesia, and off Australia. Distribution in the eastern Pacific Ocean extends from the coast of southern California (U.S.), including the Gulf of California, to Ecuador and possibly Peru (Compagno, 1984), and off waters of Hawaii (U.S.) and Tahiti.

The general life history pattern of the scalloped hammerhead shark is that of a long lived (oldest known sharks of both sexes aged at 30.5 years; Piercy et al., 2007), slow growing, and late maturing species. The scalloped hammerhead shark has a laterally expanded head that resembles a hammer, hence the common name “hammerhead,” and belongs to the Sphyrnidae family. The scalloped hammerhead shark is distinguished from other hammerheads by a marked central indentation on the anterior margin of the head, along with two more indentations on each side of this central indentation, giving the head a “scalloped” appearance. It has a broadly arched mouth and the rear margin of the head is slightly swept backward. The dentition of the hammerhead consists of small, narrow, and triangular teeth with smooth edges (often slightly serrated in larger individuals), and is similar in both jaws. The front teeth are erect while subsequent teeth have oblique cusps, and the lower teeth are more erect than the upper teeth (Florida Museum of Natural History, 2011). The body of the scalloped hammerhead is fusiform, with a large first dorsal fin and low second dorsal and pelvic fins. The first dorsal fin is moderately hooked with its origin over or slightly behind the pectoral fin insertions and the rear tip in front of the pelvic fin origins. The height of the second dorsal fin is less than the anal fin height and has a posterior margin that is approximately twice the height of the fin, with the free rear tip almost reaching the precaudal pit. The pelvic fins have relatively straight rear margins while the anal fin is deeply notched on the posterior margin (Compagno, 1984). The scalloped

hammerhead generally has a uniform gray, grayish brown, bronze, or olive coloration on top of the body that shades to white on the underside with dusky or black pectoral fin tips.

The oldest aged scalloped hammerhead sharks had lengths of 241 cm (females) and 234 cm (males) (Piercy et al., 2007), but the scalloped hammerhead shark can reach lengths of up to 365-420 cm (Compagno, 1984). The estimates on the exact age and length at sexual maturity for the scalloped hammerhead vary widely by region. In the Gulf of Mexico, Branstetter (1987) estimated that females mature around 270 cm, or about 15 years of age, and males mature around 180 cm, or 9-10 years of age. In Northeastern Taiwan waters, Chen et al. (1990) calculated age at maturity to be 4 years for females and 3.8 years for males, corresponding to lengths of 210 cm and 198 cm, respectively. Zeeberg et al. (2006) considered hammerheads greater than 140 cm to be mature in Northwest Africa, while off the coast of northern Australia, males are thought to reach maturity at 150 cm and females at 200 cm (Stevens and Lyle, 1989). On the east coast of South Africa, observed median length at maturity for scalloped hammerheads was 184 cm for females and 161 cm for males, with age estimated around 11 years (Dudley and Simpfendorfer, 2006). While it may appear that maturity estimates vary by region, it is unclear whether these differences are truly biological or a result of differences in band interpretations in aging methodology approaches (Piercy et al., 2007).

The scalloped hammerhead shark is viviparous (i.e., give birth to live young), with a gestation period of 9-12 months and likely followed by a one-year resting period (Branstetter, 1987; Stevens and Lyle, 1989; Chen et al., 1990; Liu and Chen, 1999). Females move inshore to birth during the summer months, with litter sizes anywhere between 2 and 41 live pups (Branstetter, 1987; Stevens and Lyle, 1989; Hazin et al., 2001; White et al., 2008). Length at birth estimates for scalloped hammerheads range from 31-50 cm (Branstetter, 1987; Stevens and

Lyle, 1989; Chen et al., 1990; Zeeberg et al., 2006). Juveniles remain close to inshore waters but will migrate to deeper waters as they grow. Both juveniles and adult scalloped hammerhead sharks have been found to occur as solitary individuals, as pairs, and in schools. The schooling behavior has been documented during summer migrations off the coast of South Africa as well as in permanent resident populations, like those in the East China Sea (Compagno, 1984). Adult aggregations are most common offshore over seamounts and near islands, especially near the Galapagos, Malpelo, Cocos and Revillagigedo Islands, and within the Gulf of California (Compagno, 1984; CITES, 2010). The schooling behavior exhibited by scalloped hammerheads makes them vulnerable to being caught in large numbers (Hayes et al., 2009).

The scalloped hammerhead shark is a high trophic level predator (Cortés, 1999) and opportunistic feeder, with a diet that includes a wide variety of teleosts, cephalopods, crustaceans, and rays (Compagno, 1984).

Analysis of Petition and Information Readily Available in NMFS Files

We evaluated the information provided in the petition and readily available in our files to determine if the petition presented substantial scientific or commercial information indicating that the petitioned action may be warranted. The petition contains information on the species, including the taxonomy, species description, geographic distribution, habitat, population status and trends, and factors contributing to the species' decline. The petition states that the primary threat to the scalloped hammerhead shark is exploitation by fishing, with the ongoing practice of "finning" of particular concern. The petitioners also assert that the lack of adequate regulatory protection programs worldwide, as well the species' biological constraints, increase the susceptibility of the scalloped hammerhead shark to exploitation and extinction. Although data are not available to determine the actual number or size of the global population of scalloped

hammerhead sharks, the information from our files and from the petitioners' references suggest that the scalloped hammerhead underwent significant range-wide declines from historical abundance levels (Feretti et al., 2008; Hayes et al., 2009; CITES, 2010).

According to the petition, at least three of the five causal factors in section 4(a)(1) of the ESA are adversely affecting the continued existence of the scalloped hammerhead shark, specifically: (B) overutilization for commercial, recreational, scientific, or educational purposes; (D) inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. In the following sections, we use the information presented in the petition and in our files to determine whether the petitioned action may be warranted. We consider the global population of scalloped hammerhead sharks and will revisit the question of DPSs during a status review, if necessary. We summarize our analysis and conclusions regarding the information presented by the petitioner and in our files on the specific ESA section 4(a)(1) factors affecting the species' risk of global extinction below.

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Information from the petition and in our files suggests that the primary threat to the scalloped hammerhead shark is from fisheries. We refer to the U.S. and Palau CITES (2010) proposal to list S. lewini under Appendix II (henceforth, referred to as the CITES proposal) for much of the available abundance and catch trend data as this is a recent compilation of information on the species.

Scalloped hammerhead sharks are both targeted and taken as bycatch in many global fisheries (e.g., bottom and pelagic longlines, coastal gillnet fisheries, artisanal fisheries). Because of their large fins with high fin noodle content (a gelatinous product used to make shark fin soup), scalloped hammerheads fetch a high commercial value in the Asian shark fin trade

(Abercrombie et al., 2005). In Hong Kong, the world's largest fin trade market, S. lewini and S. zygaena (smooth hammerhead) are mainly traded under the "Chun chi" market category, which also happens to be the second most traded fin category. Together, smooth and scalloped hammerheads are estimated to comprise 4-5 percent of the total fins traded in the Hong Kong market, which suggests that 1.3 to 2.7 million individuals of these species (equivalent to a biomass of 49,000-90,000 tons) are used in the Hong Kong fin trade annually (Clarke et al., 2006; Camhi et al., 2009).

In the United States, scalloped hammerhead sharks are mainly caught as bycatch in longline and coastal gillnet fisheries and are known to suffer high mortality from capture. In the northwest Atlantic, on-line mortalities (for all age groups) were estimated at 91.4 percent and 93.8 percent (Mejuto et al., 2002; Morgan and Burgess, 2007; Camhi et al., 2009). Scalloped hammerheads have also become a popular target species of recreational fishermen in the last several decades. A recent stock assessment by Hayes et al. (2009) found that the northwestern Atlantic population in 1981, which ranged between 146,000 and 165,000 individuals, has since decreased to approximately 25,000 - 28,000 individuals in 2005, a level estimated to be at 45 percent of the biomass that would produce the maximum sustainable yield (MSY). Fishing mortality was also estimated to be 129 percent of fishing mortality associated with MSY. Given the data, Hayes et al. (2009) concluded that the northwestern Atlantic S. lewini stock is only 17 percent of the virgin stock size, or, in other words, has been depleted by approximately 83 percent since 1981. In another study, Myers et al. (2007) documented a 98 percent decline of S. lewini off the coast of North Carolina between 1972 and 2003 using standardized catch per unit effort (CPUE) data from shark targeted, fishery-independent surveys. Myers et al. (2007) remarks that the trends in abundance may be indicative of coastwide population changes,

because the survey was situated “where it intercepts sharks on their seasonal migrations.” A time-series analysis conducted by Carlson et al. (2005) since 1995 suggests that the northwest Atlantic population may be stabilized but at a very low level (CITES, 2010).

According to the CITES proposal, overutilization of scalloped hammerheads has also been documented off the coast of Belize, leading to an observed decline in the abundance and size of hammerheads and prompting a halt in the Belize-based shark fishery. However, fishing pressure on hammerheads still continues as a result of Guatemalan fishermen entering Belizean waters (CITES, 2010). Further south, in Brazil, declines between 60 and 90 percent of adult female scalloped hammerheads have been reported from 1993 to 2001 using CPUE data, while the abundance of neonates has significantly decreased over the past 10 years (CITES, 2010). In inshore waters, neonates are heavily targeted by coastal gillnets and recreational fisheries, and are also caught as bycatch in shrimp and pair trawls (CITES, 2010). Further offshore, catches of scalloped hammerheads have been documented as incidental take in other directed fisheries, such as a tuna fishery based in Santos City, São Paulo State, Brazil, where data has revealed a decline in these incidental catch weights, from 290 t in 1990 to 59 t in 1996 (Amorim et al., 1998).

In the Pacific Ocean, juvenile scalloped hammerheads are targeted mainly in directed fisheries but also taken as bycatch by shrimp trawlers and coastal teleost fisheries. Importance of scalloped hammerheads in fishery landings appears to vary by region, from 11.9 percent of the total catch from El Salvador (number of individuals (n)=412; 1991-1992) to 36 percent from the Gulf of Tehauntepec, Mexico (n=8,659; 1996-1998), and ranging from 6 percent (n=339) to 74 percent (n=800) of the total catch off different parts of Guatemala (1996-1999) (CITES, 2010). In Ecuador, landings of hammerhead sharks have decreased since 1996, with a 51 percent

decline in artisanal fishery landings between 2004 and 2006 in the Port of Manta, an area where artisanal and drift-net fleets account for 80 percent of shark landings in Ecuador (CITES, 2010).

In the Indian Ocean, pelagic sharks, including the scalloped hammerhead, are targeted in various fisheries, including semi-industrial, artisanal, and recreational fisheries. Countries that fish for sharks include: Egypt, India, Iran, Oman, Saudi Arabia, Sudan, United Arab Emirates, and Yemen, where the probable or actual status of the shark populations is unknown, and Maldives, Kenya, Mauritius, Seychelles, South Africa, and United Republic of Tanzania, where the actual status of the shark population is presumed to be fully to over exploited (Young, 2006). We conclude that the information in the petition and in our files suggests that fisheries may be impacting the continued existence of the scalloped hammerhead.

Inadequacy of Existing Regulatory Mechanisms

The petition asserts that the inadequacy of existing Federal, state, or international regulatory mechanisms require that the scalloped hammerhead shark be listed under the ESA. The petition contends that the lack of specific regulations for the scalloped hammerhead has failed to prevent large population declines of the shark species. However, the latest stock assessment for the northwestern Atlantic scalloped hammerhead shark population estimated that a total allowable catch (TAC) of 2,853 scalloped hammerhead sharks per year (or 69 percent of the 2005 catch) would allow a 70 percent probability of rebuilding to MSY in 10 years (Hayes et al., 2009). Based on this assessment, on April 28, 2011, NMFS determined that the northwestern Atlantic scalloped hammerhead shark stock was “overfished” and that “overfishing is occurring,” prompting NMFS to “take action to end or prevent overfishing in the fishery and implement conservation and management measures to rebuild overfished stocks within 2 years” (76 FR 23794; April 28, 2011). This status determination is specific to the northwestern Atlantic

scalloped hammerhead shark stock and any additional regulations would be implemented to prevent large population declines of that stock.

In addition, the petition asserts that there is little international regulation of fishing or trading to protect scalloped hammerheads; however, in 2010, the International Commission for the Conservation of Atlantic Tunas (ICCAT) developed recommendations 10-07 and 10-08, which specifically prohibit the retention, transshipping, landing, sorting, or selling of hammerhead sharks, other than bonnethead sharks, caught in association with ICCAT fisheries. The ICCAT is responsible for the conservation of tuna and tuna-like species in the Atlantic Ocean and adjacent seas and its recommendations are binding to Contracting Parties (of which there are 48, including the United States), unless Parties object pursuant to the treaty. On April 29, 2011, NMFS proposed and on August 29, 2011, finalized the implementation of these recommendations, which affect the U.S. commercial HMS pelagic longline (PLL) fishery and recreational fisheries for tunas, swordfish, and billfish in the Atlantic Ocean, including the Caribbean Sea and Gulf of Mexico (76 FR 53652; August 29, 2011).

The petition notes that finning bans are a common form of shark management regulation and have been adopted by 19 countries, including Mexico, Costa Rica, and Chile, but argues that many of these bans contain loopholes that allow for the continued removal of shark fins at sea. It is important to note that the petition does not provide information that some countries and management bodies are working to address these issues, including the United States and the European Union (EU). In fact, on January 4, 2011, the 2010 U.S. Shark Conservation Act was signed. This legislation requires that all sharks caught in U.S. waters, with an exemption for smooth dogfish, be landed with fins naturally attached, effectively ending the practice of removing fins at sea in the United States (Pub. L. 111-348). However, even with the increase

and strengthening of finning bans, the lack of internationally enforced catch limits or trade regulations allows for the continued and unregulated fishing of scalloped hammerheads in international waters. In 2010, the United States and Palau proposed to list S. lewini under Appendix II of CITES, which would have imposed international trade regulations and provided protection for the species through the requirement of export permits or re-export certificates. However, this proposal was rejected. In 2011, the EU failed in its proposals to secure Indian Ocean Tuna Commission (IOTC) and Inter-American Tropical Tuna Commission (IATTC) protection for the scalloped hammerhead, which would have prohibited retaining onboard, transshipping, landing, storing, selling, or offering for sale any part or whole carcass of hammerhead sharks of the family Sphyrnidae taken in the IOTC and IATTC area of competence, respectively. In addition, information in our files and in the petition indicates that illegal fishing of this species may be occurring in certain regions. For example, in Cocos Island National Park, off Costa Rica, a “no take” zone was established in 1992, yet populations of S. lewini continued to decline by an estimated 71 percent from 1992 to 2004 (Myers et al., 2004). In Ecuador, concern over illegal fishing around the Galapagos Islands prompted a 2004 ban on the exportation of fins; however, this only resulted in the establishment of new illegal trade routes and continued exploitation of S. lewini (CITES, 2010). Thus, the information in the petition and in our files suggests that while there is increasing support for domestic and international shark conservation and regulation, the existing regulatory mechanisms in some portions of the S. lewini range may be inadequate to address threats to the global scalloped hammerhead population.

Other Natural or Manmade Factors

The petition contends that “biological vulnerability” in the form of long gestation periods, late maturity, large size, and documented schooling behavior, is affecting the species’ ability to recover from exploitation. However, a recent ecological risk assessment for pelagic sharks found that scalloped hammerheads ranked among the less vulnerable species in terms of its biological productivity and susceptibility to the pelagic longline fisheries in the Atlantic Ocean (Cortés et al., 2010), suggesting a low risk of overexploitation. In addition, the petition states that “high predation on pups further hampers the species’ ability to recover,” but Clarke (1971) noted that despite this mortality, the population of pups remains high in nursery grounds and suggested that birth rates may match mortality rates, hence protecting the population from significant losses. Thus, available information is insufficient to indicate that there has been any negative effect on the scalloped hammerhead shark’s ability to recover due to its biological characteristics.

The petition also asserts that “human population growth” may pose a serious threat to the scalloped hammerhead population. However, broad statements about generalized threats to the species do not constitute substantial information indicating that listing may be warranted. Although the petition presents information that the human population may be expanding, it does not provide information indicating an increase in fishing pressure on scalloped hammerhead sharks due specifically to this human population growth, or information that scalloped hammerhead sharks are responding in a negative fashion to human population growth.

Summary of Section 4(a)(1) Factors

We conclude that the petition presents substantial scientific or commercial information indicating that a combination of two of the section 4(a)(1) factors: overutilization for commercial, recreational, scientific, or educational purposes, and inadequate existing regulatory

mechanisms, may be causing or contributing to an increased risk of extinction for the scalloped hammerhead shark.

Petition Finding

After reviewing the information contained in the petition, as well as information readily available in our files, and based on the above analysis, we conclude the petition presents substantial scientific information indicating the petitioned action of listing the scalloped hammerhead shark as threatened or endangered may be warranted. Therefore, in accordance with section 4(b)(3)(B) of the ESA and NMFS' implementing regulations (50 CFR 424.14(b)(2)), we will commence a status review of the species. During our status review, we will first determine whether the species is in danger of extinction (endangered) or likely to become so (threatened) throughout all or a significant portion of its range. If it is not, then we will consider whether the populations identified by the petitioner meet the DPS policy criteria, and if so, whether any of these are threatened or endangered. We now initiate this review, and thus, the scalloped hammerhead shark is considered to be a candidate species (69 FR 19975; April 15, 2004). Within 12 months of the receipt of the petition (August 14, 2012), we will make a finding as to whether listing the species (or any identified DPSs) as endangered or threatened is warranted as required by section 4(b)(3)(B) of the ESA. If listing the species (or any identified DPSs) is found to be warranted, we will publish a proposed rule and solicit public comments before developing and publishing a final rule.

Information Solicited

To ensure that the status review is based on the best available scientific and commercial data, we are soliciting information on whether the scalloped hammerhead shark is endangered or threatened. Specifically, we are soliciting information in the following areas: (1) historical and

current distribution and abundance of this species throughout its range; (2) historical and current population trends; (3) life history in marine environments; (4) shark fin trade data; (5) any current or planned activities that may adversely impact the species; (6) ongoing or planned efforts to protect and restore the species and their habitats; (7) population structure information, such as genetics data; and (8) management, regulatory, and enforcement information. We request that all information be accompanied by: (1) supporting documentation such as maps, bibliographic references, or reprints of pertinent publications; and (2) the submitter's name, address, and any association, institution, or business that the person represents.

References Cited

A complete list of references is available upon request from NMFS Protected Resources Headquarters Office (see ADDRESSES).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Dated: November 21, 2011.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

